

Thursday 17 January 2013 – Morning

AS GCE INFORMATION AND COMMUNICATION TECHNOLOGY

G061/01 Information, Systems and Applications

Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

None

Duration: 2 hours



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **120**, of which marks are allocated to the assessment of the quality of written communication where an answer requires a piece of extended writing. These questions are marked with an asterisk (*).
- This document consists of **20** pages. Any blank pages are indicated.

EJO is an art gallery that displays and sells the work of artists.

Each piece of art in the gallery is labelled with details about the work and the artist. The label also contains data.

- 1 (a) Show, using an example related to EJO, how data can become information through the application of context, structure and meaning.

Data

Context

Structure

Meaning

[4]

- (b) The labels contain text and pictures to convey information to visitors.

Identify **two** other methods that could be used to convey information within the gallery, and for each give an advantage of its use.

1

.....

Advantage

.....

2

.....

Advantage

.....

[4]

EJO provides guided tours of the art gallery.

2 EJO uses a computerised booking system to allow visitors to book guided tours.

(a) Describe **three** characteristics of a computerised booking system.

1

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2

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3

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[6]

Part of the tour database is shown below.

TourID*	CustomerID	Number in Party	Paid?	Time	Date	GuideID
54	354	2	Y	12.30	14/7/2012	14
55	355	3	Y	13.00	14/7/2012	17
57	12	1	N	13.00	14/7/2012	17
58	356	2	Y	16.30	14/7/2012	12

* Primary key

(b) State the most appropriate data type for the following fields in the tour database.

Number in Party

Paid?

[2]

(c) Give **two** advantages of using the autonumber data type for the TourID.

1

.....

2

.....

[2]

(d) Describe the following terms used in relational databases.

Foreign key

.....

.....

.....

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Table

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.....

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[4]

(e) Describe the role of the one to many relationship in a relational database.

.....

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.....

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[2]

3 EJO is considering producing leaflets so that visitors can tour the gallery without being accompanied by a guide.

(a) One source of information for the leaflet could be the internet.

Explain **two** advantages of using the internet as a source.

1

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2

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[4]

(b) Proof reading is one method of verification.

Show, using an example, how proof reading could still result in errors in the leaflet.

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[2]

(c) (i) Describe the following characteristics of documents that could be in the leaflet.

Footnote

.....

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Section

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Paragraph

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[6]

(ii) For each of the following, give an example of how it could be used in the leaflet.

Footnote

.....

Section

.....

Paragraph

.....

[3]

(d) EJO uses computers to create the text for the leaflets.

For each of the following, give an example of a cost incurred by EJO in producing the leaflet.

Software

.....

Consumable

.....

Personnel

.....

[3]

4 EJO is investigating output devices that will produce high quality maps of the gallery for visitors to carry.

Identify an appropriate output device for performing the above task, justifying your choice of device.

Output Device [1]

Justification

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..... [6]

5 EJO has produced a slideshow advertising the gallery. The slideshow will be displayed in a local tourist centre.

(a) Compare the use of automatic and manual transition in the slideshow.

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..... [4]

(b) Navigation in a presentation can be non-linear or hierarchical.

One of the presentations used by EJO is given by a speaker to a group of visitors. The presentation is given to each tour by different employees during the day.

Describe **two** advantages of using hierarchical navigation in this presentation.

1

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2

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..... [4]

- (c) One of the tour guides from EJO is giving a presentation to a local art society. They will be using printed acetate.

Describe **two disadvantages** of delivering a presentation using printed acetate.

1

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2

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[4]

6 EJO is having software created to catalogue the art work.

The software will have a form interface.

(a) Describe **two** characteristics of a form interface.

1

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2

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[4]

(b) The interface will contain form controls.

Describe the following form controls and for each, give an appropriate use.

Spinner

.....

.....

..... [2]

Use

..... [1]

Option Button

.....

.....

..... [2]

Use

..... [1]

8 EJO is considering expanding their building.

(a) Explain **two** advantages of using modelling software to create a model of the expansion.

1

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2

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..... [4]

Part of a spreadsheet used by EJO is given below.

	A	B	C	D	E	F
1	Artist Name	Piece ID	Price	Sold	Commission	Total to Artist
2	J. White	54	£600	Y	£60	£540
3	P. Yellow	765	£1,200	N	£0	
4	R. Green	34	£450	Y	£45	£405
5	B. Purple	243	£850	Y	£85	£765
6						
7			Total		£190	

(b) Using the spreadsheet, describe and give examples of the use of the following.

Variable

 [2]

Use
 [1]

Function

 [2]

Use
 [1]

9 EJO is concerned that the information they hold on their computers is vulnerable to theft.

(a) Explain how the following methods protect ICT systems.

Encryption

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Firewall

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Software patches

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[6]

EJO have been informed that they need to register with the Information Commissioner.

(b) The Data Protection Act (1998) (DPA) was created to protect data about the individual.

Identify **two** rights the user has under the DPA.

1

2

[2]

10 EJO requires a relational database to be developed that will:

- store details of artists and their works;
- store details of customers;
- store details of sales.

(a) Two of the entities are CUSTOMER and ARTIST.

Identify **two** other entities that would be needed to create the database to meet EJO's requirements.

1

2

[2]

(b) Create an entity relationship diagram for the relational database identifying the degree of the relationships between the entities.

[4]

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